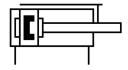
Guided actuators DFM-20-80-P-A-GF-F1A

FESTO

Part number: 8118848





General operating condition

Data sheet

excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure 0.2 MPa 1 MPa Operating pressure 2 bar 10 bar Max. speed 0.8 m/s Mode of operation Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries mexcluded from use. Exceptions are nickel in steel, chemically reached and coils.	Feature	Value
Piston diameter 20 mm Drive unit operating mode Cushioning Elastic cushioning rings/pads at both ends Mounting position Any Guide Stiructural design Guide Structural design For proximity sensor Symbol 00991737 Variants Metals with copper, zinc or nickel by mass as main constituent an excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure 0.2 MPa 1 MPa Operating pressure 2.2 bar 10 bar Max. speed 0.8 m/s Mode of operation Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) 0 - No corrosion stress LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class CRC 1.80 °C Lampact energy in the end positions 0.2.1 Max. force Fy 709.3 N Max. force Fy 50.57 Nm Max. static moment Mx Max. torque My	Distance of centre of gravity of payload to yoke plate xs	50 mm
Drive unit operating mode Cushioning Elastic cushioning rings/pads at both ends Mounting position Any Guide Sliding guide Structural design For proximity sensor Symbol Variants Metals with copper, zinc or nickel by mass as main constituent an excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure Oz. MPa 1 MPa Operating pressure Oz. MPa 1 MPa Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) O No corrosion stress LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature Max. force Fy 709.3 N Max. force Fz 709.3 N	Stroke	80 mm
Cushioning Elastic cushioning rings/pads at both ends Mounting position Any Guide Sliding guide Structural design For proximity sensor Symbol 00991737 Variants Metals with copper, zinc or nickel by mass as main constituent an excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure 0.2 MPa 1 MPa Operating pressure 2 bar 10 bar 0.8 m/s Mode of operation Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) 0 - No corrosion sitess LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically riplated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature 20 °C 80 °C Impact energy in the end positions 0.21 Max. force Fy 709.3 N Max. force Fy 5tatic 709.3 N Max. force Fy 5tatic 709.3 N Max. force Fz 5tatic 709.3 N Max. force Fz 709.3 N Max. force Fz 709.3 N Max. force Fz 709.3 N Max. static moment Mx 20.57 Nm Max. static moment Mx Max. static moment Mx Max. torque My	Piston diameter	20 mm
Mounting position Guide Structural design Guide Structural design For proximity sensor Symbol Oop91737 Variants Metals with copper, zinc or nickel by mass as main constituent an excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure Operating pressure Operating pressure Operating pressure Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) O- No corrosion stress LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically in plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature Impact energy in the end positions O.21 Max. force Fy To9.3 N Max. force Fy To9.3 N Max. force Fy To9.3 N Max. force Fz To9.3 N Max. force Fy Max. static moment Mx Double acting Max. torque My Max. torque My L6.31 Nm	Drive unit operating mode	Yoke
Guide Structural design Guide Position sensing For proximity sensor Symbol O0991737 Variants Metals with copper, zinc or nickel by mass as main constituent an excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure O.2 MPa 1 MPa Operating pressure O.2 MPa 1 MPa Operating pressure O.3 m/s Mode of operation Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operating mild in the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions 0.2 J Max. force Fy Max. force Fy Max. force Fy static 709.3 N Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. static moment Mx 20.57 Nm Max. static moment Mx Max. static moment Mx Ax. torque My 16.31 Nm	Cushioning	Elastic cushioning rings/pads at both ends
Structural design Position sensing For proximity sensor Symbol Variants Metals with copper, zinc or nickel by mass as main constituent an accuracy and coils. Operating pressure Operating pressure Operating pressure Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operating and pilot media Operation with oil ubrication possible (required for further use) Corrosion resistance class (CRC) O - No corrosion stress LABS (PWIS) conformity WDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions 0.21 Max. force Fy 709.3 N Max. force Fy Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. static moment Mx Ax. torque My 16.31 Nm	Mounting position	Any
Position sensing For proximity sensor Symbol O0991737 Wariants Metals with copper, zinc or nickel by mass as main constituent are excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure Operating pressure Operating pressure Osa m/s Mode of operation Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) On No corrosion stress LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically in plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions O.2 J Max. force Fy Max. force Fy 709.3 N Max. force Fy Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. static moment Mx Max. static moment Mx Max. static moment Mx Max. static moment Mx Max. torque My 16.31 Nm	Guide	Sliding guide
Symbol Variants Metals with copper, zinc or nickel by mass as main constituent an excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure Operating pressure Operating pressure 2 bar 10 bar Max. speed Os. 8 m/s Mode of operation Operating medium Information on operating and pilot media Operation with oil lubrication possible (required for further use) Orosion resistance class (CRC) LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions O.21 Max. force Fy 709.3 N Max. force Fz 709.3 N Max. force Fz 709.3 N Max. force Fz 709.3 N Max. force Fz static 709.3 N Max. static moment Mx 20.57 Nm Max. static moment Mx Ams. torque My 16.31 Nm	Structural design	Guide
Variants Metals with copper, zinc or nickel by mass as main constituent are excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure O.2 MPa 1 MPa Operating pressure 2 bar 10 bar Max. speed O.8 m/s Mode of operation Double-acting Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Orrosion resistance class (CRC) LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically replated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions O.2 I Max. force Fy 709.3 N Max. force Fy 709.3 N Max. force Fz 709.3 N Max. force Fz static 709.3 N Max. static moment Mx 20.57 Nm Max. static moment Mx Ams. torque My 16.31 Nm	Position sensing	For proximity sensor
excluded from use. Exceptions are nickel in steel, chemically nick plated surfaces, printed circuit boards, cables, electrical plug con and coils. Operating pressure O.2 MPa 1 MPa Operating pressure 2 bar 10 bar Max. speed O.8 m/s Mode of operation Double-acting Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) O · No corrosion stress LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically in plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature impact energy in the end positions O.2 J Max. force Fy 709.3 N Max. force Fy 709.3 N Max. force Fz 709.3 N Max. force Fz 709.3 N Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx Max. static moment Mx Max. torque My 16.31 Nm	Symbol	00991737
Operating pressure Max. speed O.8 m/s Mode of operation Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically a plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions 0.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx Max. static moment Mx Max. torque My 16.31 Nm	Variants	Metals with copper, zinc or nickel by mass as main constituent are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.
Max. speed O.8 m/s Mode of operation Double-acting Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically a plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions O.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx Max. static moment Mx Max. torque My 16.31 Nm	Operating pressure	0.2 MPa 1 MPa
Mode of operation Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) Corrosion resistance class (CRC) LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically a plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions 0.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx Max. static moment Mx 16.31 Nm	Operating pressure	2 bar 10 bar
Operating medium Compressed air as per ISO 8573-1:2010 [7:4:4] Information on operating and pilot media Operation with oil lubrication possible (required for further use) O - No corrosion stress LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions 0.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz z static 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 16.31 Nm	Max. speed	0.8 m/s
Information on operating and pilot media Operation with oil lubrication possible (required for further use) O - No corrosion stress LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically in plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions 0.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Mode of operation	Double-acting
Corrosion resistance class (CRC) LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions 0.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz to Top.3 N Max. force Fz to Top.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 16.31 Nm	Operating medium	Compressed air as per ISO 8573-1:2010 [7:4:4]
LABS (PWIS) conformity VDMA24364-B1/B2-L Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mass excluded from use. Exceptions are nickel in steel, chemically plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature Impact energy in the end positions 0.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz to Top.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Information on operating and pilot media	Operation with oil lubrication possible (required for further use)
Suitability for the production of Li-ion batteries Metals with more than 1% by mass of copper, zinc or nickel by mare excluded from use. Exceptions are nickel in steel, chemically in plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature -20 °C 80 °C Impact energy in the end positions 0.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz 709.3 N Max. force Fz 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx Max. torque My 16.31 Nm	Corrosion resistance class (CRC)	0 - No corrosion stress
are excluded from use. Exceptions are nickel in steel, chemically in plated surfaces, printed circuit boards, cables, electrical plug con and coils Cleanroom class Class 7 according to ISO 14644-1 Ambient temperature Impact energy in the end positions O.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx Max. torque My 16.31 Nm	LABS (PWIS) conformity	VDMA24364-B1/B2-L
Ambient temperature -20 °C 80 °C Impact energy in the end positions 0.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz 709.3 N Max. force Fz 709.3 N Max. force Fz 109.3 N Max. force Fz 109.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Suitability for the production of Li-ion batteries	Metals with more than 1% by mass of copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils
Impact energy in the end positions 0.2 J Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Cleanroom class	Class 7 according to ISO 14644-1
Max. force Fy 709.3 N Max. force Fy static 709.3 N Max. force Fz 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Ambient temperature	-20 °C 80 °C
Max. force Fy static 709.3 N Max. force Fz 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Impact energy in the end positions	0.2 J
Max. force Fz 709.3 N Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Max. force Fy	709.3 N
Max. force Fz static 709.3 N Max. torque Mx 20.57 Nm Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Max. force Fy static	709.3 N
Max. torque Mx 20.57 Nm Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Max. force Fz	709.3 N
Max. static moment Mx 20.57 Nm Max. torque My 16.31 Nm	Max. force Fz static	709.3 N
Max. torque My 16.31 Nm	Max. torque Mx	20.57 Nm
	Max. static moment Mx	20.57 Nm
Max. static moment My 16.31 Nm	Max. torque My	16.31 Nm
,	Max. static moment My	16.31 Nm

Feature	Value
Max. torque Mz	16.31 Nm
Max. static moment Mz	16.31 Nm
Max. permissible torque load Mx as a function of the stroke	3.04 Nm
Max. payload as a function of the stroke at defined distance xs	86 N
Theoretical force at 6 bar, retracting	141 N
Theoretical force at 6 bar, advancing	188 N
Moving mass	672 g
Product weight	1422 g
Alternative connections	See product drawing
Pneumatic connection	M5
Note on materials	RoHS-compliant
Cover material	Wrought aluminum alloy
Seals material	NBR
Housing material	Wrought aluminum alloy
Piston rod material	High-alloy stainless steel